

Annual Update

Kentucky Commercialization Fund (KCF)
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Submitted to:

Kentucky Council on Postsecondary Education

Submitted by:

Kentucky Science and Technology Corporation (KSTC)

PO Box 1049

Lexington, KY 40588-1049

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September 15, 2007

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FY2007 Annual Update

July 1, 2006 – June 30, 2007

Submitted to:



Kentucky Council on Postsecondary Education
Frankfort, KY

Kentucky Commercialization Fund

Fiscal Years 2002 – 2007

Applications Received	37
Funds Requested	\$4,492,033
Awards Made	23
Funds Awarded	\$3,444,192

Submitted by:



KENTUCKY SCIENCE & TECHNOLOGY
C O R P O R A T I O N

PO Box 1049, Lexington, KY 40588-1049
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Introduction to KSTC

Kentucky began to address “the gap” with the passage of House Bill 572, The Kentucky Innovation Act of 2000. With the passage of The Innovation Act, Kentucky began to develop its own resources to make the Commonwealth more competitive.

The Kentucky Science and Technology Corporation (KSTC) manages the Kentucky Science and Engineering Foundation (KSEF) and the Kentucky Experimental Program to Stimulate Competitive Research (EPSCoR) programs that provide the pipeline of technologies at Kentucky universities for commercialization.

KSTC’s mission is to create wealth for the citizens of Kentucky and to enhance the state’s image as an attractive and thriving location in which to start and grow successful businesses based on advanced technology.

KSTC programs use a proven, systematic approach in which we:

- Evaluate the technical, market and business propositions of an enterprise,
- Invest pre-seed and/or seed stage capital funding,
- Provide advice on management team creation and capital structuring,
- Coordinate the journey through the commercialization process and
- Eliminate obstacles, facilitate strategic partnering and, in doing so, accelerate the commercialization process.

KSTC is focused on the creation of technology-based economic development and the attraction and retention of the state’s most valuable resources – its people. Through our collaborative efforts, the Commonwealth will better compete in the global marketplace and continue to build a reputation of being a first-class state in which to live, learn and grow.

The Kentucky Commercialization Fund (KCF)

The goal of the Kentucky Commercialization Fund program is to “to provide funding ... for the development and commercialization of promising technologies emerging from Kentucky’s universities.” The award requires the technology to be no more than one to two (in some cases three) years away from commercialization. The program provides a funding pathway for Kentucky University faculty to move pre-screened, successful research projects from the “bench to the boardroom”.

Eligibility Requirements

The purpose, amounts, eligibility and structure of Kentucky Commercialization Fund (KCF) program have not changed since the establishment of the program. They are summarized in Table 1.

Table 1: Summary of eligibility requirements and details of the KCF awards

Fund	Purpose	Funding	Eligibility	Structure
<i>Kentucky Commercialization</i>	University based technology commercialization	\$75,000 per year	University Faculty	Royalty payback

By contrast the purpose, amounts, eligibility and structure of other funds managed by the Kentucky Science and Technology Corporation are shown below.

Table 2: Summary of eligibility requirements and details of all KSTC

Fund	Purpose	Funding	Eligibility	Structure
<i>KSEF</i>	Advanced research and technology development	Up to \$100,000	University faculty and small technology businesses	Grant to university faculty / convertible note for businesses receiving greater than \$25,000
<i>ICC Concept Pool</i>	Business development activities	Up to \$25,000	Active ICC Client	Grant
<i>Rural Innovation</i>	Proof of concept development or early stage prototype	Level 1: \$25,000 Level 2: \$50,000 per year up to two years	Small, rural Kentucky based companies	Less than \$25,000, grant; Greater than \$25,000, convertible note or syndication
<i>R & D Voucher</i>	Technology based product development	\$100,000 per year up to two years	Small to medium Kentucky based companies; Must contract with a Kentucky university; Company match investment funding 1:1	Convertible note or Syndication
<i>Kentucky Gap Fund</i>	Executive talent, business and market development	Up to \$400,000; part of \$1M round	Former Kentucky Enterprise Fund recipients	Syndication

Key Metrics for the KCF Program

Prior to FY 07 the KCF Program had a total of 13 awards, seven of which were completed and six were still active on FY 07 (Table 3). Ten new awards were made based on the call for proposals made in August 11, 2006 (COMMFUND-006).

Table 3: Status of FY02 – FY 06 awarded projects (as of June 30, 2007)

FY 02 – FY 06 Kentucky Commercialization Fund Awards	
Active Awards	6
Completed Awards	7

Thirteen pre-proposals were received for COMMFUND-006 call for proposals (Table 4), and the face-to-face interviews were held between August 11, 2006 and September 12, 2006. Ten candidates were invited to submit full proposals on September 8, 2006 as a result of their

interviews. Three pre-proposals were considered still in the research and development stage and not ready for development for commercialization. These three applicants were not selected for the next application phase but were encouraged to continue with R&D and consider resubmitting a new proposal on a future date. All ten proposals submitted by September 29, 2006 were evaluated by KSEF and KEF as well as by external reviewers selected based on both their research and entrepreneurial expertise. All ten proposals were deemed technically acceptable and recommended for funding. Approvals by KSTC Executive Committee were made on April 12, 2007 for a total of \$1,157,599.

Additionally, four applications were received for continuation of funding for another year. These applicants had an existing approved award. Based on the progress made in the previous year, continuation of funding for these three applications for an additional year was approved for a total of \$299,928 on October 2, 2006.

Table 4: KCF Applications, Renewals and Awards during FY 06-07 and since Inception

	FY02 – FY06	FY07	TOTAL
# Applications Reviewed	24	13	37
Funds Requested	\$2,884,434	\$1,607,599	\$4,492,033
# of Approved Awards	13	10	23
Awards Amount	\$927,552	\$1,157,599	\$2,085,151
# Applications Renewal Awards	17	4	21
# Approved Renewal Awards	17	4	21
Amount Renewal Awards	\$1,059,113	\$299,928	1,359,041
# Awards + Renewals	30	14	44
Total Amount (Awards + Renewals)	\$1,986,665	1,457,527	\$3,444,192

Awards to Universities

As a condition of The Kentucky Innovation Act of 2000, a maximum of 70% of awards can be made to the University of Kentucky and the University of Louisville combined. KSTC has satisfied this requirement. Figures 1 and 2 represent the distributions of funds in FY 06-07 (Figure 1) and since the inception of the program 2002 (Figure 2).

Figure 1: Distribution of funds awarded during FY2007 by organization

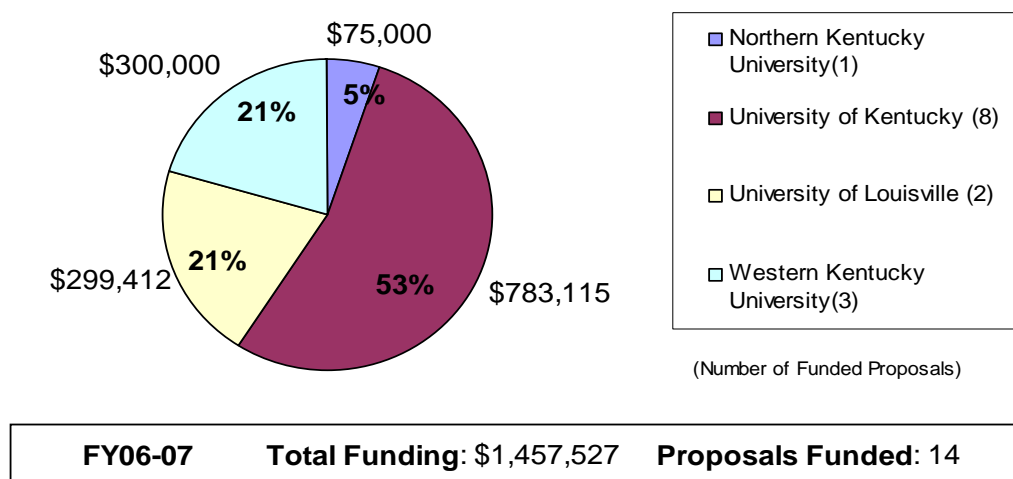
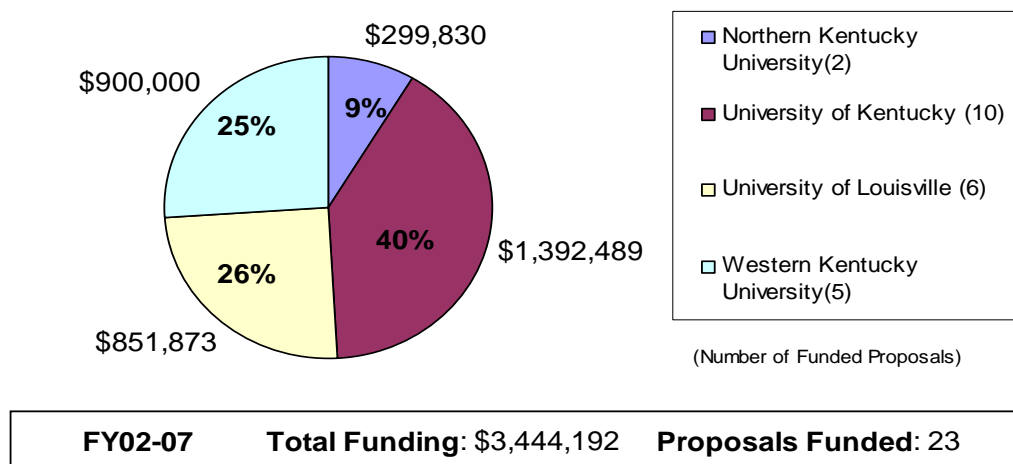


Figure 2: Distribution of funds awarded since inception of the program (FY 02-07) by organization



Year-to-year variation on the number of proposals and funds requested exists; nevertheless, over the lifetime of the program, 44% of the funds have been disbursed to universities and colleges other than the University of Kentucky and the University of Louisville.

Awards by Research Area

In the March 2002 Strategic Plan for the New Economy, Kentucky identified five priority research areas representing high-potential technology clusters: Biosciences, Environmental and Energy Technologies, Human Health and Development, Information Technology and Communications, and Materials Science and Advanced Manufacturing. The distribution of KCF awards by Research Focus Area for FY06-07 (Figure 3) and since the inception of the program in 2002 (Figure 4) are shown below.

Figure 3: Distribution of funds awarded during FY06-07 by research focus area

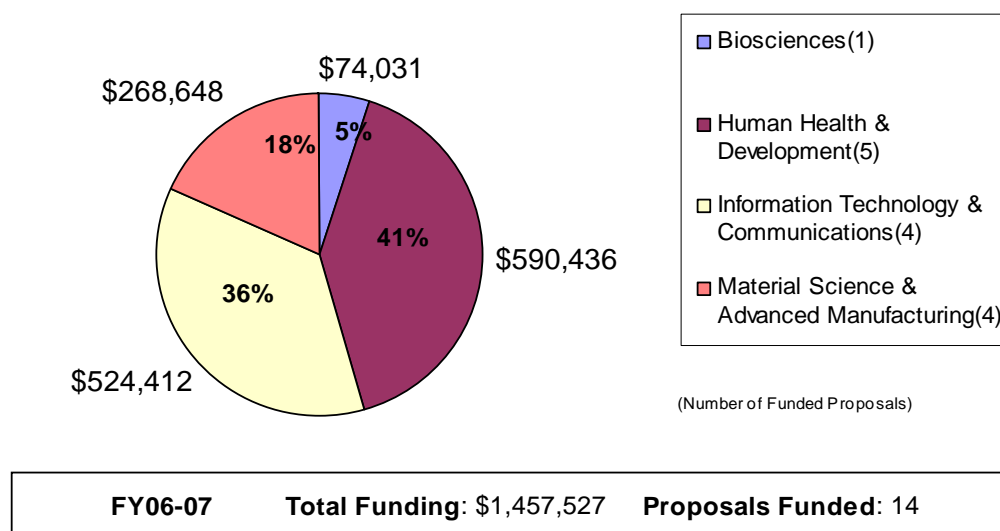
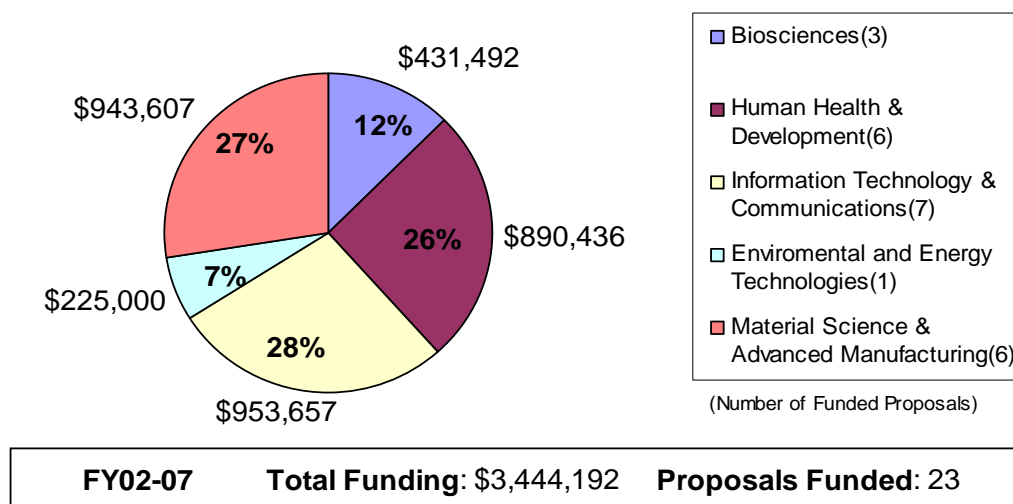


Figure 4: Distribution of funds awarded since inception of the program (FY 02-07) by research focus area

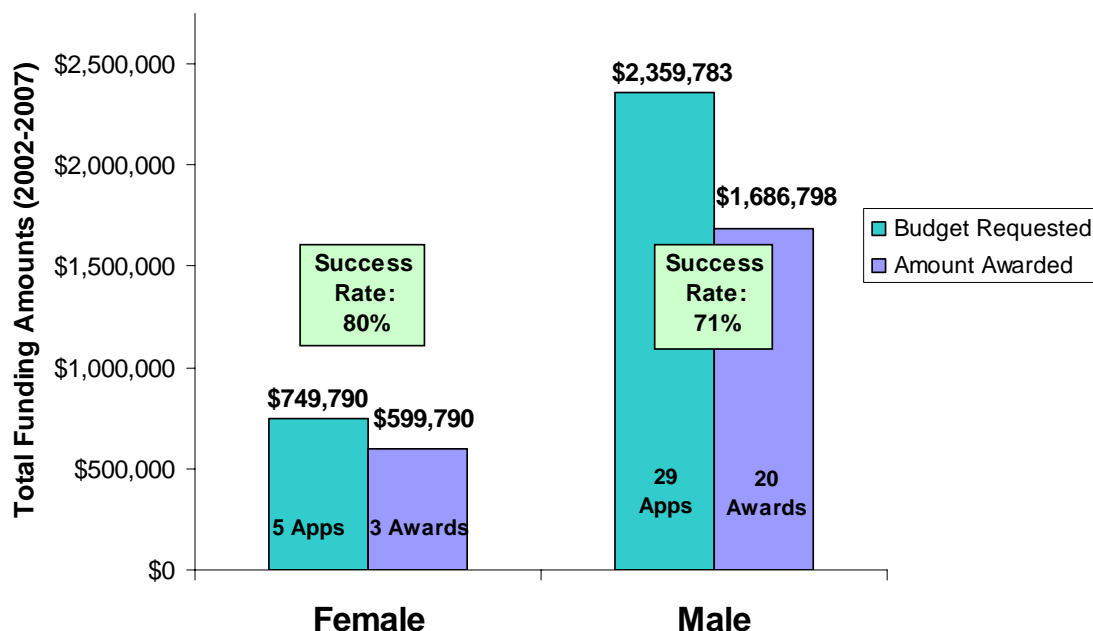


The majority of proposals submitted and awarded were from Human Health and Development, Information Technology and Communications, and Materials Science and Advanced Manufacturing research focus areas. In FY 06-07 these three focus areas combined received 95% of awarded funds, compared to 81% for the period FY 02-07.

Awards by Gender

Of the 37 applications submitted to KCF since 2002, based on the gender data reported, five applications were submitted by female and 29 by male PIs. Their success rate has been 80% and 71%, respectively (Figure 5).

Figure 5: Applications and awards, funds requested and awarded for the period FY 02-07 distributed by gender



Program Outcomes and Success Stories

The goal of KCF is to fund projects that will develop and commercialize technologies with promising economic potential either by creating a new enterprise that will generate jobs and revenue for the state of Kentucky or by transferring the technology to a company generating royalty income for the university. For this to happen, the KCF award should help in generating intellectual property (IP) and the resultant technology should attract external funding from federal or private/venture investments.

Intellectual Property

Since the inception of the KCF program, six of the KCF awardees have filed some form of protection to their intellectual property – four invention disclosures, one provisional patent, five patent applications, three US patents, and one technology licensing. Some other awardees have preferred to keep their technology proprietary.

Technology Transfer and Creation of a New Enterprise

Two KCF funded technologies have been licensed by the university to two different companies: Sure Gene LLC and Assenti LLC. These companies are new start-up enterprises from faculty members. One company has successfully secured both SBIR Phase I and Phase II funds. Another KCF awardee created a company, APST LLC, in the second year of the award to explore other funding opportunities including SBIR/STTR.

SBIR/STTR and Other Investment Funds

The new start-up companies have been successful in attracting additional funding from external sources. For example:

- Assenti, LLC – received \$1,251,462 in SBIR Phase I and Phase II grants from NIH. The company is in the process of seeking \$10 million in private equity investment.

- o SureGene, LLC – received \$497,266 in NIH SBIR Phase I grant over two years.

Success Stories

Examples of positive outcomes from the initial KCF awards have begun to emerge and their potential to improve the technological advances being made in Kentucky can be noted from the examples summarized below.

Smart IOP – John Naber (University of Louisville)

Dr. Naber, Associate Professor of the Department of Electrical and Computer Engineering at the University of Louisville, developed a microchip to care for individuals with glaucoma by accurately monitoring intraocular pressure outside the physician's office. Glaucoma affects over three million Americans and over sixty million people worldwide. Without careful monitoring and daily treatment, glaucoma can cause irreversible visual damage or even blindness. The technology, the Smart IOP, was transferred to Assenti LLC who will develop and market a new biosensor platform. Assenti has received both Phase I (October 2003) and Phase II (May 2006) NIH-SBIR Awards for \$500K and \$750K respectively. Their system will integrate battery-less telemetry circuitry with Micro-Electrical Mechanical Systems (MEMS) pressure sensors to revolutionize the current standard of care for glaucoma-diagnosed individuals. At its current state, the sensor is a passive device that can perform and report the intraocular pressure. Assenti is in preclinical trials and seeks to raise \$10 million in private equity investments for further system development, clinical trials and market launch. The results and potential of the Smart IOP were presented in the 2007 Venture Forum (<http://www.theventureforum.com/presentingCompaniesSectorList.asp>).

Cellulose Derived Composites (CDC) – Chris Byrne (Western Kentucky University)

Dr. Byrne, Associate Professor of the Department Mechanical Engineering at Western Kentucky University, prior to joining WKU developed a porous carbonized wood material that may be used for various applications such as filters, carbon-polymers or carbon-carbon composites. The carbonized wood may also be converted to a ceramic such as silicon carbide. The goal of the proposal was to research production routes and potential markets for these composite materials. The new technologies developed are being kept as proprietary knowledge. To date, there is no other company, university or individual in existence that has made these composite materials. The Principal Investigator (PI) made contact and signed an agreement with the President Custom Materials, Inc., Dr. Nagle, to arrange for future commercialization of the CDC.

Genetic Tests for Psychiatric Disorders – Mark Brennan (University of Louisville)

Dr. Mark Brennan, Professor of the Department of Biochemistry and Molecular Biology at University of Louisville, has worked for over ten years analyzing genes involved in genetically complex neuropsychiatric diseases such as schizophrenia, bipolar disorder and obsessive-compulsive disorder. Dr. Brennan received KCF funds to identify the specific genes involved with, as well as cellular and biochemical pathways that contribute to, psychological variation of schizophrenia. This information was licensed to pharmaceutical companies that can use it to aid in the development of new drugs or procedures to accurately diagnosis and use targeted treatment of psychological disorders. On May 3, 2004, Dr. Brennan and Mr. Tim Bransey formed SureGene LLC; the company owns a proprietary set of genetic markers, the AssureGene™ test for Schizophrenia. SureGene submitted and was awarded funds for an NIH SBIR/STTR Phase I for \$497, 266 for the period of 2006-2008.

KCF Program Refinements

The Kentucky Commercialization Fund (KCF) Program was refined for operational ease and record keeping. These included:

1. Development of an application template for continuation of previously funded awards.

This hastened the review and approval process for continuing the existing and pre-approved awards. A separate application template was developed (please see the attached template). This separate application form allowed inclusion of information on the progress made in the previous year, plans for the following year, Gantt Chart, and to discuss delays and difficulties in achieving the project goals. The revised draft will be updated in coming years on a need basis.

2. Revision of guidelines for KCF program.

The program guidelines were revised to re-emphasize the purpose of the program and how it differs from a program that just funds the research (please see revised guidelines). As a result of this revision, the majority of applications received under the last solicitation included project tasks that will enhance the commercial potential of the technology. It is believed that the improvement made in the program guidelines will reduce the number of research-focused applications and attract applications that are not far from commercialization.

3. Revised application process.

The revision in the program guidelines necessitated a revision in the application process. Applicants were asked to submit a pre-proposal (please see the attached template) outlining the proposal in brief including the description of technology, information that is limiting the commercialization of technology, proposed plan of work, Gantt chart and the funding required to complete the project. Upon review of the pre-proposals, applicants were required to discuss and defend their proposal in a face-to-face interview. Successful applicants were then requested to submit a full proposal (please see the attached template). The applications were further reviewed for their technical merit and business potential using internal and external resources including the peer reviewers and the Kentucky Enterprise Fund staff. Based on the reviews and available funds, a list of recommended proposals was prepared, which was further reviewed and discussed by an internal KSTC Review Team. Finally, the recommendations for the KCF awards were submitted for consideration and approval by the KSTC Board of Directors Executive Committee.

4. Development and implementation of an on-line application review process.

In the second half of FY07, an online reviewing system for the external peer-review process was developed and introduced. Reviewers that accepted our invitation to review proposals were provided with an ID (their personal e-mail address) and a password to access the documentation pertinent to the peer review process. Confidentiality and non-disclosure of information agreements were required to be electronically signed in order to access the proposal material. New guidelines for the peer-review process were developed based on the goals for the program. A set of questions were required to be answered by the reviewers.

5. KCF Award Agreement.

The award agreement language for the KCF awards was revised to make it appropriate for the university; the language in the previous version had its orientation towards a business. The revised agreement also included language that made the Principal Investigator (PI) responsible for the award repayment if the university decides not to pursue protection of the intellectual property and transfers its interest and ownership to the PI.

Addendum

Pre-proposal Kentucky Commercialization Fund

KENTUCKY COMMERCIALIZATION FUND PRE-PROPOSAL

		Applicant Name:	
Please do NOT delete questions when typing answers.		ICC Office:	
		Received Date:	Reference #:
Check here if this pre-proposal contains proprietary and privileged information: <input type="checkbox"/>			
Are you an "Active" client of the Kentucky Innovation and Commercialization Center (ICC)? Yes <input type="checkbox"/> No <input type="checkbox"/>			
If yes, do you give permission to share pre-proposal information with the ICC Director at your regional office? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Who is your ICC contact person:			
APPLICANT INFORMATION			
University Name:	Faculty Member Name:	Title:	
Work Phone:	Mobile Phone:	Fax:	
E-mail:	Other	Website:	
Mailing Address:		Physical Address (if different than mailing):	
County:		County:	
PROJECT INFORMATION			
1. Project title:			
2. List five (5) keywords that describe the technology:			
3. Is this project being submitted to any other agency? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, list name, location, purpose of funds, and amount requested:			
4. Amount of funds requested: \$ (Max is \$75,000 per year)			

Project Summary

5. Provide a brief non-technical summary of the technology/product/process that is a candidate for commercialization.

Technical Brief

6. Describe the technology. How is this technology new, unique and technically feasible? How does this compare with the state of the art of the technology?
7. What stage of development is the technology in? For example, is it a concept only? Has a prototype been developed? If not, please describe when you expect to have a prototype. Has the prototype been tested? If so, what were the results of the testing?

Commercialization Brief

8. What customer problem does the product/service/technology (PST) solve? What market or markets are you targeting for this technology? How large are these markets? How does each market currently address the problem that this PST solves?
9. Commercialization Path. Please describe the plans for continuing development of the product or technology. What is the anticipated cost and time to fully commercialize? What are the major steps remaining for commercialization?

Project Team

10. Research and Business Team. Describe the research and business team within this section of the pre-proposal. Provide a brief description for each member. Identify any talent gaps. How and when do you intend to address these gaps?
11. Faculty (Principal Investigator) Research Goals and Commercialization Experience. Describe your long-term research goals, prior experience in commercializing a technology and how this technology/product/process integrates into your overall goals.
12. Source of Funds Used in Developing the Technology/Product/Process. Please list the sources of funds that supported the prior R&D in developing this technology.

For submission of the pre-proposal, on or before the deadline send both:

- o An electronic copy via e-mail to: mjain@kstc.com
- o And a hard copy to: Kentucky Science and Technology Corporation (KSTC), 200 W. Vine Street, Suite 420, Lexington, KY 40507

KENTUCKY COMMERCIALIZATION FUND PROPOSAL INSTRUCTIONS

This section provides instructions for the proposal form which begins on [page 5](#). All proposals must be typed (single-spaced) using Arial 10 pt. font or Times New Roman 12 pt. font on one side of the paper. All sections of the proposal must be completed on the designated form, or the proposal will not be accepted (this includes budget forms).

Efforts should be made to include all information within the body of the proposal. Other attachments such as key relevant research papers, drawings, etc. may be attached; however, if possible, please include an electronic .PDF copy of all attachments. Electronic copies speed up the proposal review process.

The proposal must be signed by the authorized representative of the university such as the Director of the Office of Sponsored Projects.

The Office of Technology Transfer must provide a written assessment of the technology, their interest in commercializing the technology, and whether KCF funds will help them expedite its commercialization. This letter must be attached to this proposal.

General Information

This section requires all contact information for the university faculty.

Intellectual Property

The technology being commercialized under this award should involve patentable products/processes or intellectual property that can be protected through copyright or other legal means. Please provide patent or patent application numbers. During the due diligence process, we may verify the patent numbers. If you do not have and do not intend to apply for intellectual property protection, please provide a detailed explanation.

Technical Assessment

This section is geared toward describing the commercial potential of the technology. The description must include enough detail to determine whether the technology is feasible and how it is unique or different from technology currently commercialized. This assessment calls for information related to the stage of development of the technology and the logistics of full-scale production. You are encouraged to attach any photographs, design specifications, or diagrams that may help to fully explain the technology.

Technical Narrative

The technical narrative will include a clear statement of work and the methods you plan to employ to achieve it. The technical discussion is intended to provide detailed scientific/technical information that will be used by peer reviewers and the KCF Selection Committee to determine scientific soundness, technical and financial feasibility, qualifications of project team, and whether or not the project has a clear technical and commercialization plan with achievable milestones and adequate facilities and equipment. All applicants must complete this technical narrative section regardless of the project genre. If you have specific questions about how to address this task, please call us to discuss.

State the objectives of your technology development. Describe the expected significance, relation to long-term goals, present state of knowledge in the field and the present state of your technology. The narrative description should not only indicate the general plan of work

to be done but also include an adequate description of experimental methods and procedures that indicate how it will be done.

The plan should indicate the persons who will be performing specific project tasks. The narrative should also describe how the proposed project will add value and if this effort will stimulate or result in technology commercialization. The technical materials and experimental methods or procedures should be supported with appropriate literature citations. Please number any references in the narrative text and attach the list of references as an appendix item. Please include as much technical detail as possible, including drawings.

Please also attach any relevant and key research papers, or additional technical information that may help in adequate review of your proposal. Please include a Gantt Chart outlining the timeline of project deliverables. (Sample Gantt Chart is included in this proposal.)

Market Assessment

This section allows you to explain how your product can be differentiated in the market (i.e. what will compel users to purchase your product vs. another product?) You will need to demonstrate how your technology meets a clear market demand or solves a problem, outline what kind of market research you have done or will do, outline who will buy the product, how they will buy and at what price. You will also need to outline go-to-market strategy or discuss how you will go about developing a marketing strategy and plan.

Business Assessment

This section allows you to explain how the technology will lead to a product or venture that will make a profit, and how it will generate sufficient returns to justify an investment. You are asked to illustrate your financial model and discuss your business plan or means to generate a business plan. Please also provide information regarding the future of your business such manufacturing plans, plans to receive further investments, licensing strategies, or strategy for sale of the company.

Business Team

With any new business venture, it is important to have good leadership. Since applicants to the fund are generally faculty members, we recognize that a full management team may not be a reality. For each manager, we will need to know their qualifications and why they add value to your organization. Many of the managers will be consultants to your organization. In the Business Team Section, please identify consultants or mentors that have agreed to provide leadership and business guidance during the commercialization process.

Budget Instructions

1. The budget form has been developed using an embedded Microsoft Excel worksheet in the Microsoft Word file.
2. Double click on the budget form in the proposal (Word document).
3. This should open a usable embedded Microsoft Excel spreadsheet. Type all of your numbers directly into the Excel Spreadsheet. It will automatically update on the Microsoft Word page.
4. If you have trouble using the spreadsheet, please contact KSTC.
5. The budget is for 1 year only. If the proposal is approved for two years, the budget for the second year will be invited for approval only upon making satisfactory progress in the first year.

SUBMITTING YOUR PROPOSAL

Where Do I Send My Proposal?

*****PROPOSALS MUST BE RECEIVED AT KSTC BY 5:00 PM (EST) ON THE DEADLINE DATE*****

An authorized representative of the university must sign the proposal.

Applicants must submit the proposal as follows:

- One (1) electronic copy (MSWord format only) of the completed proposal via e-mail to mjain@kstc.com; **and**
- One (1) signed original completed proposal and one (1) complete copy of the completed proposal delivered to KSTC. Please mark each as "original" or "copy."

Fax documents are not accepted.

Send proposal packages to Kentucky Science & Technology Corporation:

Physical Address:	US Mail Address:
Kentucky Science & Technology Corporation Attn: Mahendra Jain 200 W. Vine Street, Suite 420 Lexington, Kentucky 40507 (859) 233-3502 x225	Kentucky Science & Technology Corporation Attn: Mahendra Jain PO Box 1049 Lexington, Kentucky 40588-1049 Email: mjain@kstc.com

Proposal Attachments Checklist

These attachments are mandatory, with the exception of research papers or drawings if they are not applicable to your project. When possible, please submit electronic copies of attachments when you email your proposal. Please also include hard-copies of the attachments with the hard copy of your proposal.

1. **The Office of Technology Transfer** must provide a written letter assessing the commercial potential of the technology and indicating their plans for commercializing the technology. This letter must be attached to this proposal.
2. **Curriculum Vitae** for all faculty listed in the proposal.
3. **Resumes** for business team.
4. **Intellectual Property**. Please submit copies of patents, patent applications, copyrights, copyright applications, and other intellectual property.
5. **License Agreements**. Please submit copies of licensing agreements with any third-parties for any intellectual property that your university does not own.
6. **Third-Party Consultant Quote**. Provide a signed statement of work for each third-party contractor listed on your budget form.
7. **Research Papers or Drawings**. Please submit only key research-papers or drawings outlining your technology, if applicable to your project.


PROPOSAL

**TO PROPERLY VIEW SECTIONS OF THIS PROPOSAL,
PLEASE SELECT "VIEW" AND "PAGE LAYOUT"
IN MICROSOFT WORD.**

For best results, please use Microsoft Word 2003.

- Complete the following proposal by typing answers directly on the proposal form, including completion of the budget form.
- Insert space as needed to complete your answers.
- Do NOT delete bold typed questions when typing answers.
- Remove all instructional pages prior to the proposal page, including this page, before submitting your proposal to KSTC

KENTUCKY COMMERCIALIZATION FUND PROPOSAL

		Applicant Name:	
		ICC Office:	
Please do NOT delete questions when typing answers.		Received Date:	Reference #:
Check here if this proposal contains proprietary and privileged information: <input type="checkbox"/>			
Are you an "Active" client of the Kentucky Innovation and Commercialization Center (ICC)? Yes <input type="checkbox"/> No <input type="checkbox"/>			
If yes, do you give permission to share proposal information with the ICC Director at your regional office? Yes <input type="checkbox"/> No <input type="checkbox"/>			
Who is your ICC contact person:			
APPLICANT INFORMATION			
University Name:	Faculty Member Name:	Title:	
Work Phone:	Mobile Phone:	Fax:	
E-mail:	Other	Website:	
Mailing Address:		Physical Address (if different than mailing):	
County:		County:	
PROJECT INFORMATION			
13. Is this project being submitted to any other agency? Yes <input type="checkbox"/> No <input type="checkbox"/> If yes, list name, location, purpose of funds, and amount requested:			
14. Amount of funds requested and the period in years: \$ (Max is \$75,000 per year)			
15. What is the expected cost to take this product/technology/service from the current state to commercialization? \$			

FACULTY OVERVIEW AND PROJECT SUMMARY

16. Please describe the overview of your position at the University, your research goals and how this technology/product/process integrates into your overall goals. You should also describe your prior experience in commercializing a technology, if any.

17. CONCEPT: NON-CONFIDENTIAL Please give a brief, non-confidential description of your project in fifteen words or less: ("Process to make paint dry faster," "Method to reduce bone fractures," etc.)

18. BRIEF NON-CONFIDENTIAL EXECUTIVE SUMMARY OF PROJECT. If you are funded, this description will be used on the KSTC website and in press release documentation. Please write assuming a general, non-technical audience. We reserve the right to alter this statement to our specifications. (300 words; use "Tools, Word Count" to verify):

ECONOMIC IMPACT

19. Jobs Impact: The information will be used to gauge job creation and/or salary increases as a result of funding. Please fill out the chart as a baseline. If you are funded, you will provide updated information in your progress reports.

Total number of employees (include yourself as 1): _____

Title	Name	Employee Location (city, state)	Average annual wage
			\$
			\$
			\$
			\$
			\$
			\$
			\$

Additional information regarding economic impact of project, if any:

LEGAL DISCLOSURES

20. Please check if your company is of the following:

☐ **Woman-owned** *[Definition: A small business concern that is at least 51% owned by one or more women, or in the case of any publicly owned business, at least 51% of the stock is owned by women, and women control the management and daily business operations. "Control" in this context means exercising the power to make policy decisions. "Operate" in this context means being actively involved in the day-to-day management.]*

☐ **Socially & Economically Disadvantaged** *[Definition: A member of any of the following groups: Black Americans, Hispanic Americans, Native Americans, Asian Pacific Americans, Subcontinent Asian Americans: Other groups designated from time to time by SBA to be socially disadvantaged; or any other individual found to be socially and economically disadvantaged by SBA pursuant to Section 8(a) of the Small Business Act, 15 U.S.C. 637(a). See 13 CFR Part 124 – 8(A) Business Development/Small Disadvantaged Business Status Determinations, §124.103 ("Who is socially disadvantaged?") and §124.104 ("Who is economically disadvantaged?")]*

21. Legal Disclosures

Given that these awards are based upon state funding, we are required to ask if you are a lobbyist or related to one. If so, what organization are you or your relations affiliated with?
☐ Yes, Explain:
☐ No

Are you, or any of your relatives, members of the legislative committee in Kentucky?
☐ Yes ☐ No

If you have already formed a company, are you or any of your stockholders, managing members, management team or employees a member of the legislative committee in Kentucky and/or a lobbyist or related to one?
☐ Yes, Explain:
☐ No

Are there any judgments or court actions completed or pending against the applicant entity, or any current or prospective employees, officers, principals, directors, or owners?
☐ Yes, Explain:
☐ No

Has any current or prospective employee, officer, principal, director, or owner been accused or convicted of any crime or wrongdoing?
☐ Yes ☐ No

Have there been any current or past bankruptcies on the part of the applicant entity (or predecessor entities), or on the part of any current (or prospective) officer, principal, owner, or in any business dealings of current (or prospective) officers, principals, or owners of the applicant entity?
☐ Yes, Explain:
☐ No

22. Conflict of Interest. If you have already formed a company, please state any known conflicts of interest on the part of the entity and its current and proposed employees, officers, principals, directors, or owners. If none, please indicate N/A.

INTELLECTUAL PROPERTY

23. Intellectual Property: The technology to be developed under this award should involve patentable products/processes or intellectual property that can be protected through copyright or other legal means. Please provide patent/application NUMBERS. Please select the appropriate option from the left column and fill in the information in the right column.

Patent Application	<input type="checkbox"/> Kentucky Commercialization Fund will be used to apply for patent protection. Details on the Invention Disclosure to the University <input type="checkbox"/> University has already applied for Patent protection: Provisional patent application number: Patent application number: Owner/Assignee: Status of application:
Patent Awarded	<input type="checkbox"/> This technology is covered under patent protection. Patent application number: Owner/Assignee: If not the owner, does faculty member have exclusive licensing rights?
Other Intellectual Property Application	<input type="checkbox"/> Kentucky Commercialization Fund will be used to apply for intellectual property protection. <input type="checkbox"/> University has already applied for Intellectual property protection: Type (copyright, trademark): Owner/Assignee: If not the owner, does faculty member have exclusive licensing rights? Status of application:
Other Intellectual Property Awarded	<input type="checkbox"/> Intellectual property protection has been applied for this technology. Type (copyright, trademark): Owner/Assignee: If not the owner, does faculty member have exclusive licensing rights? Status of application:
No Intellectual Property Sought	<input type="checkbox"/> We do not intend to seek intellectual property protection. Please explain why, and how the technology will be kept proprietary:

TECHNICAL ASSESSMENT

24. Describe the technology. How is this technology new, unique and technically feasible? How does this compare with the state of the art of the technology?

25. What stage of development is the technology in? For example, is it a concept only? Has a prototype been developed? If yes, describe and attach diagrams or photos. If not, please describe when you expect to have a prototype. Has the prototype been tested? If so, what were the results of the testing?

26. What are the total costs associated with producing the product? If unknown, please describe how you will determine costs.

27. Technical Narrative. The technical narrative will include a clear statement of work and the methods you plan to employ to achieve it. The technical narrative is intended to provide detailed scientific/technical information that will be used by peer reviewers and the review board of KSTC to determine scientific soundness, technical feasibility, qualifications of project team, whether or not the project has a clear plan with milestones, and achieves financial feasibility. All projects should be able to complete this technical review regardless of the project genre.

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MARKET ASSESSMENT

28. What customer problem does the product/service/technology (PST) solve? What market or markets are you targeting for this technology? How large are these markets? How does each market currently address the problem that this PST solves?

29. What competing companies or technologies currently address the market need you are targeting? What unique features and benefits will differentiate your PST from the competition? Do these features and benefits create a sustainable competitive advantage?

30. Is the PST available for sale today? What is the intended distribution strategy (e.g. direct sales, distribution or channel partnerships, etc.)? How do you know customers are willing to buy the PST?

BUSINESS ASSESSMENT	
BUSINESS TEAM	
31. Research and Business Team. Describe the business team within this section of the proposal. Provide information for each member. If you wish to submit additional information, such as a resume, you may attach it to the proposal. FOR EACH MEMBER OF THE MANAGEMENT TEAM: Name: Title: Qualifications (degrees, experience, etc.) Relationship to the faculty member What aspects do they bring to the company that will add value?	
32. Identify any talent gaps. How and when do you intend to address these gaps?	
33. Have you identified total financial needs and/or secured any seed capital? If yes, please explain. If you have a business plan, please attach.	

34. Funds already expended in the development of this technology:

Goal Accomplished	Amount of funds spent \$	Source & Date of Funds:

35. Describe how this product, service, or technology will make a profit. What are the expected costs? What is the expected price? Explain how this opportunity will generate sufficient returns to justify the investment. What are your financial assumptions? Do you have a financial model (if so, please attach).

36. If your research is successful, does the business team plan to form a company? Please explain.

37. Commercialization Path. Please describe the plans for continuing development of the product or technology. What is the anticipated cost and time to fully commercialize? What are the major steps remaining for commercialization?

2007 KSTC Annual Report on Kentucky Commercialization Fund
Submitted to Kentucky Council on Postsecondary Education
Submitted by Kentucky Science and Technology Corporation

BUDGET					
38. Budget Form: Double-click anywhere on the form below to fill out the budget. Add lines if necessary. If you have trouble enabling this embedded form, please contact KSTC. Please provide a budget narrative on the next page.					
Proposal Reference Number: CIF-			Blue fields = data is input Black fields = formulas		
	person name/position	months	KCF Funds Requested Year 1	months	KCF Funds Requested Year 2 (optional)
A. Senior Personnel					
	Faculty or third person 1	0	\$0.00	0	\$0.00
	Faculty or third person 2	0	\$0.00	0	\$0.00
	Other	0	\$0.00	0	\$0.00
	Total Senior personnel:	0	\$0.00	0	\$0.00
B. Other Personnel (show number in notes)					
	Post doctoral associates	0	\$0.00	0	\$0.00
	Other professionals (technicians, programmers, etc.)	0	\$0.00	0	\$0.00
	Graduate students	0	\$0.00	0	\$0.00
	Other	0	\$0.00	0	\$0.00
	Other	0	\$0.00	0	\$0.00
	Total other Personnel:	0	\$0.00	0	\$0.00
C. Fringe Benefits (Health insurance, benefits, etc.)			\$0.00		\$0.00
	TOTAL SALARY/BENEFITS ALL PERSONNEL		\$0.00		\$0.00
D. Other Direct Costs					
	(please describe - use notes space if needed)				
	Equipment (\$5,000 per year maximum)		\$0.00		\$0.00
	Materials and supplies		\$0.00		\$0.00
	Publication costs		\$0.00		\$0.00
	Total		\$0.00		\$0.00
E. Total Direct Costs (A+B+C+D)			\$0.00		\$0.00
F. Indirect Costs			We will only pay an indirect cost of 10%		
	(specify rate and base)		\$0.00		\$0.00
G. Travel (Domestic Only)			\$0.00		\$0.00
H. Other Direct Costs			\$0.00		\$0.00
	Business/Consultant Services		\$0.00		\$0.00
	Business/Consultant Services		\$0.00		\$0.00
	Subawards		\$0.00		\$0.00
	Other		\$0.00		\$0.00
	Total		\$0.00		\$0.00
	TOTAL TRAVEL + INDIRECT + OTHER DIRECT COSTS		\$0.00		\$0.00
TOTAL PROJECT COST - 1 YEAR			\$0.00		\$0.00
TOTAL PROJECT COST - OVERALL			\$0.00		
You will have the opportunity to provide a budget narrative in the sections to follow.					

BUDGET NARRATIVE

39. Budget Narrative. For the above excel spreadsheet, please provide a narrative. We need to know who is doing what, what the money is needed for, and how it will be spent.

Personnel: For each individual listed in the budget, please provide the following information:

FOR EACH:

Name of University:

Name of University Employee:

Address:

Phone/Email:

Qualifications:

What aspects will they bring to the development of the technology that will add value to the technology or lead to a commercializable product?

Other Personnel/Consultants: Describe your relationship and provide all background information regarding the organization or individual. You must submit a copy of the letters of commitment from your consultants as a verification that they agree to the scope of work and their consulting rate indicated in the budget. It is necessary to submit a copy of the contract with the consultant within 30 days of the announcement of the award. Funds expended prior to approval of funding will not be reimbursed.

FOR EACH:

Name of Company/University:

Name of Contact:

Address:

Phone/Email:

Qualifications:

What aspects will they bring to the development of the technology that will add value to the technology or lead to a commercializable product?

If funded, what will this consultant deliver to the company/university?

Materials and Supplies/ Travel/Other Direct Costs: For expenditures that are not for personnel or consulting services, please explain the use and benefit of each line item.

FOR EACH:

Line Item:

Use and benefit:

40. Deliverables. If you are funded, you will be monitored by the completion of deliverables. Please provide a list of deliverables that can be delivered to KSTC, reviewed, and documented as accomplishments as a result of this funding. The deliverables should be well-defined Please delete/add lines as needed.

1. Deliver to KSTC...
2. Deliver to KSTC...
3. Deliver to KSTC...

41. Gantt Chart:

A Gantt chart should provide a clear understanding of the work schedule relative to time and financial expectations. This outline will estimate the progression of the Technical Narrative and should closely correspond to the stages described in the Technical Narrative (#15 above). It should be broken down by general processes and then by the component steps in the process. Each process and component step must contain information related to time and cost. A sample but very brief Gant Chart is below for your reference.

42. Facilities and Equipment:

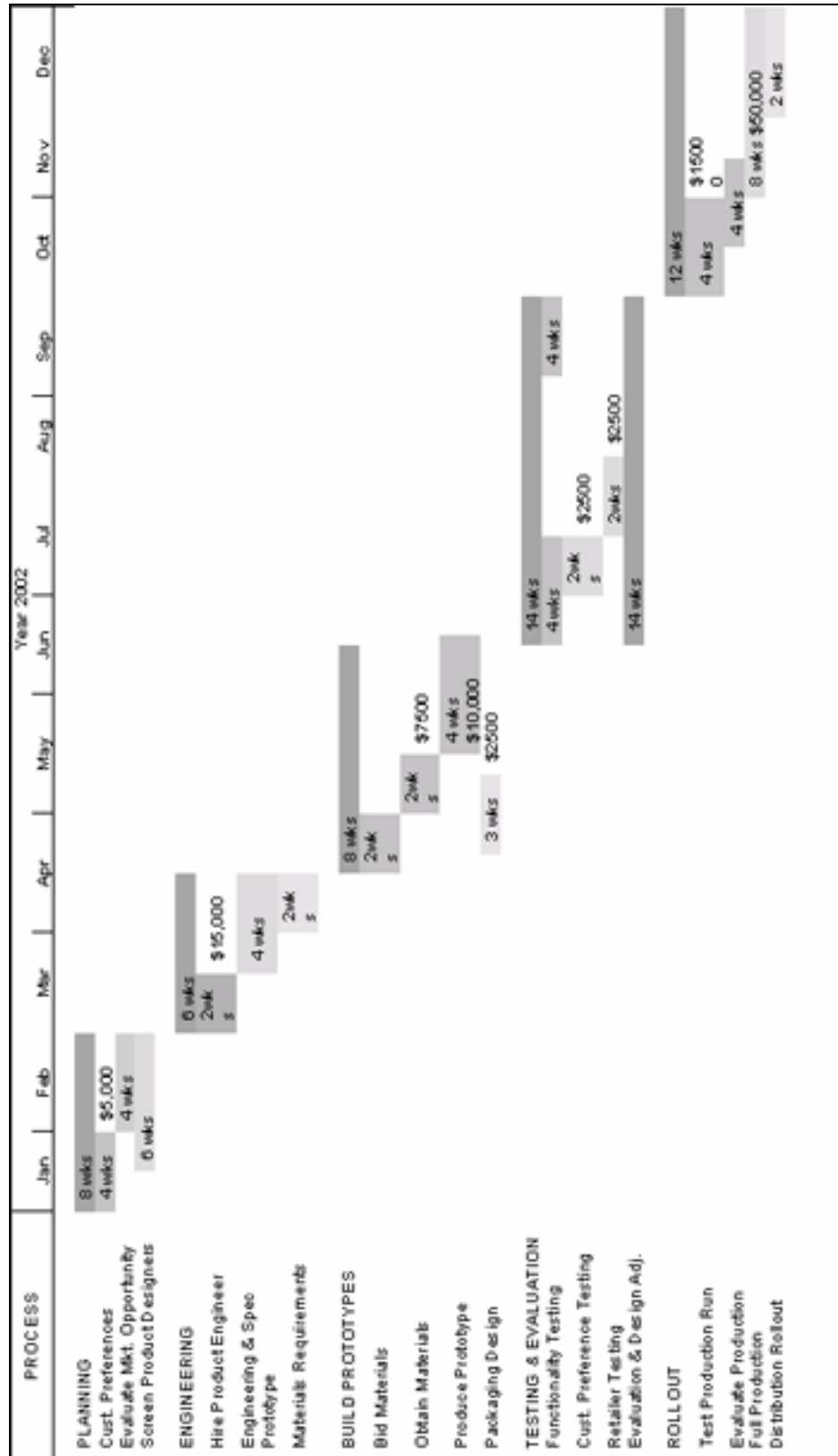
A detailed description of the availability and location of the facilities and accessibility to the equipment necessary to carry out the proposed work.

43. Biographical Sketches:

Identify key personnel and provide biographical sketches. Limit biographical sketches to 2 pages but include education, experience, and a list of relevant publications or achievements.

44. References/Publications: If this request is based on publicly funded research already performed, what are the reporting requirements of that research? Has the research already been publicly reported on in journals or papers?

Sample Gantt Chart



Signature Page

As authorized representative and agent of the applicant entity, I have read and understood all of the rules and policies pertaining to this proposal. I grant permission to verify any and all information contained in the proposal or which may have a bearing on the proposal, and I grant permission to the entity to which proposal is made to have released to them any and all relevant information pertaining to this proposal. I affirm that no false or misleading statements have been made or allowed to stand in this proposal. I also affirm that the proposal entity shall comply with the reporting and monitoring requirements if an award is granted.

I acknowledge that KSTC desires to publicize and promote the Kentucky Enterprise Fund for the benefit of the Commonwealth of Kentucky and its citizens and I agree they have my permission as agent for the applicant entity to use the applicant's business name and other non-confidential information in various media for this purpose.

Faculty Signature/Date: _____	Name, Title (typed) :
University Authorized Signature/Date: _____	Name, Title (typed) :

Applications must be signed by your local ICC Program Representative

_____	_____
ICC Director	Date

Note: KSTC requires that the applicant supply copies of their agreements with all third-party consultant(s) related to the funding.